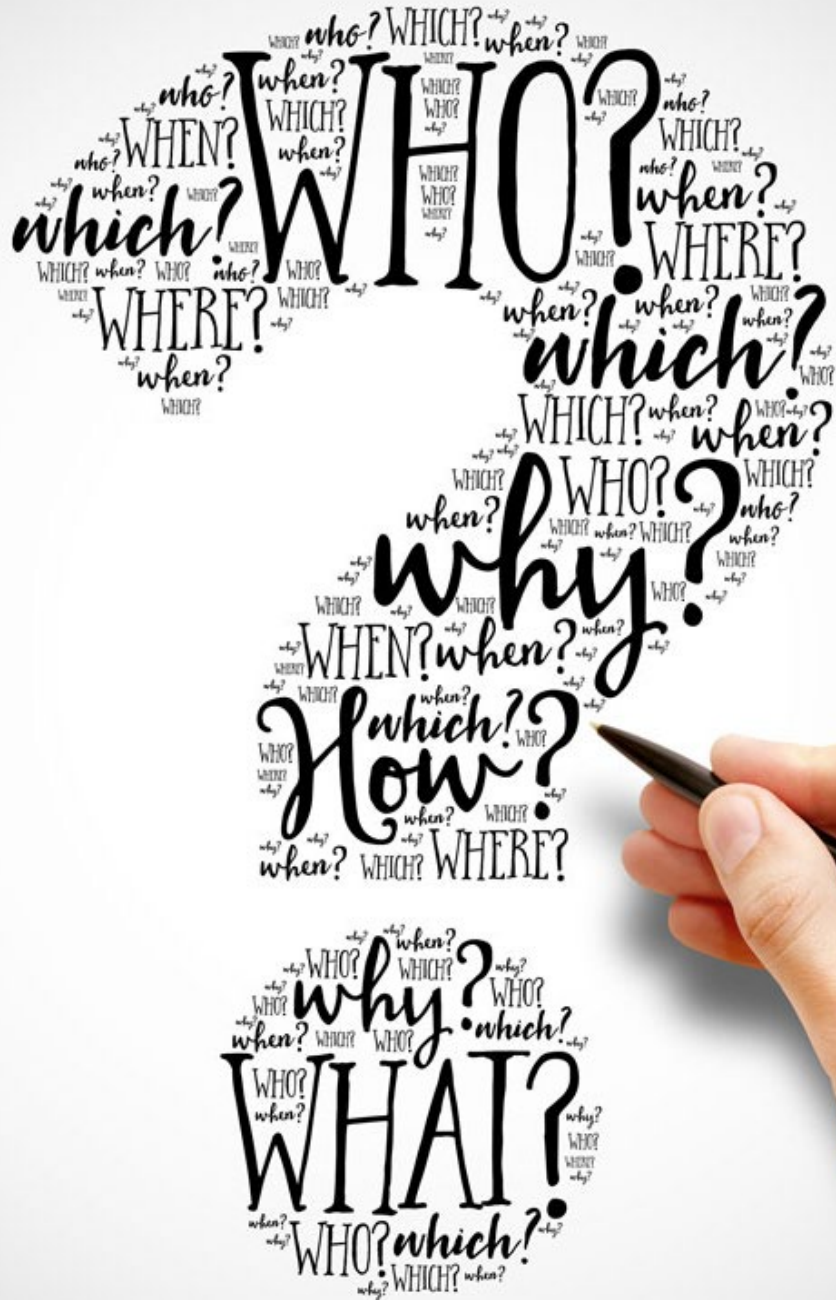


# ***zomato***

The Zomato logo is displayed in a white, bold, italicized sans-serif font against a red background. A magnifying glass with a yellow handle and a blue lens is positioned over the end of the word. Inside the lens is a small bar chart with three bars of increasing height, colored blue, red, and yellow from left to right. To the right of the magnifying glass, there are two red circles of different sizes on the white background.

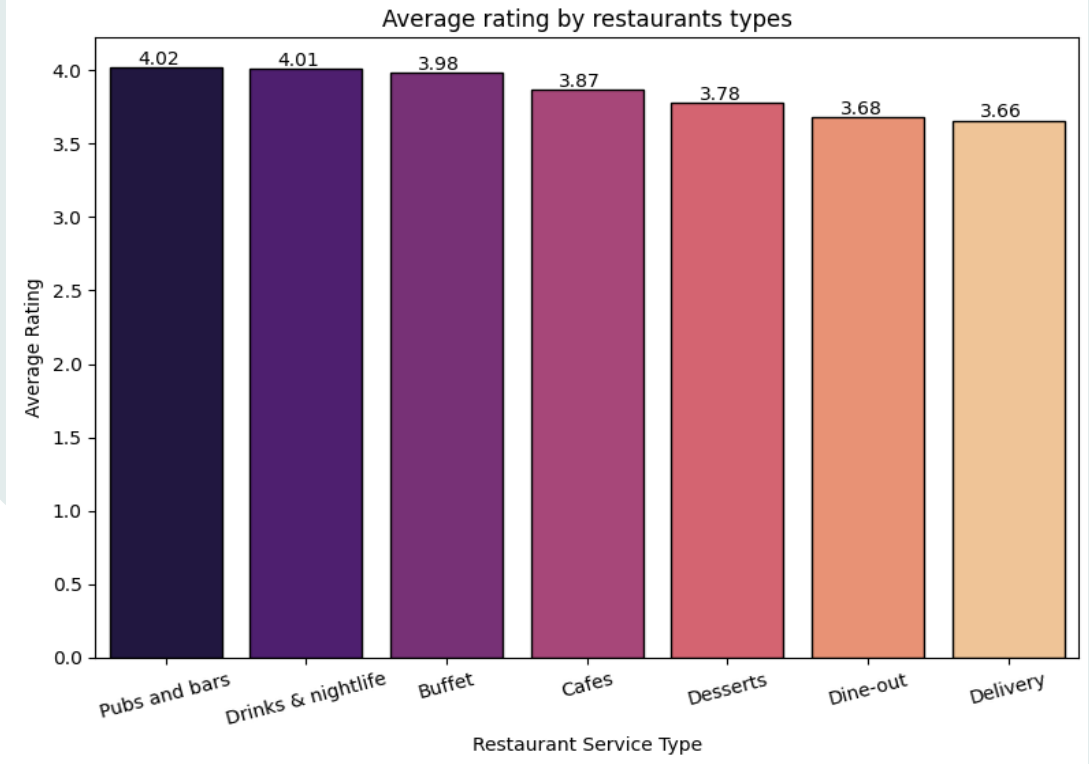
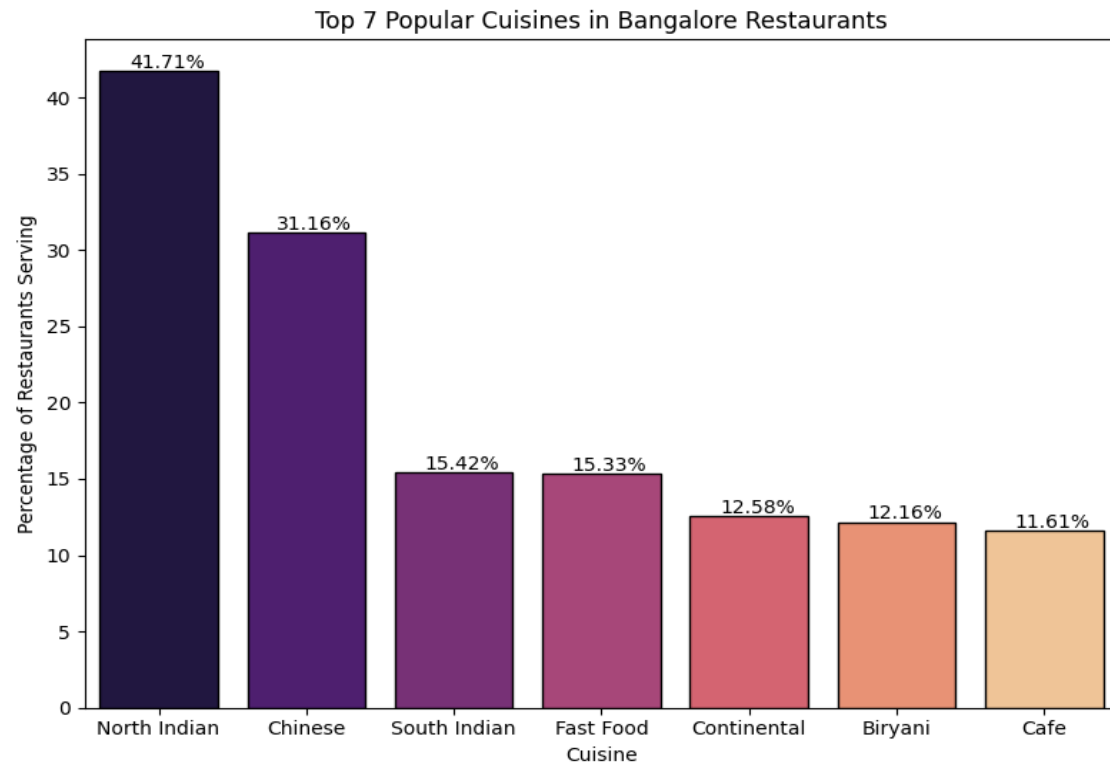
Bangalore Restaurants  
Analysis - Success prediction





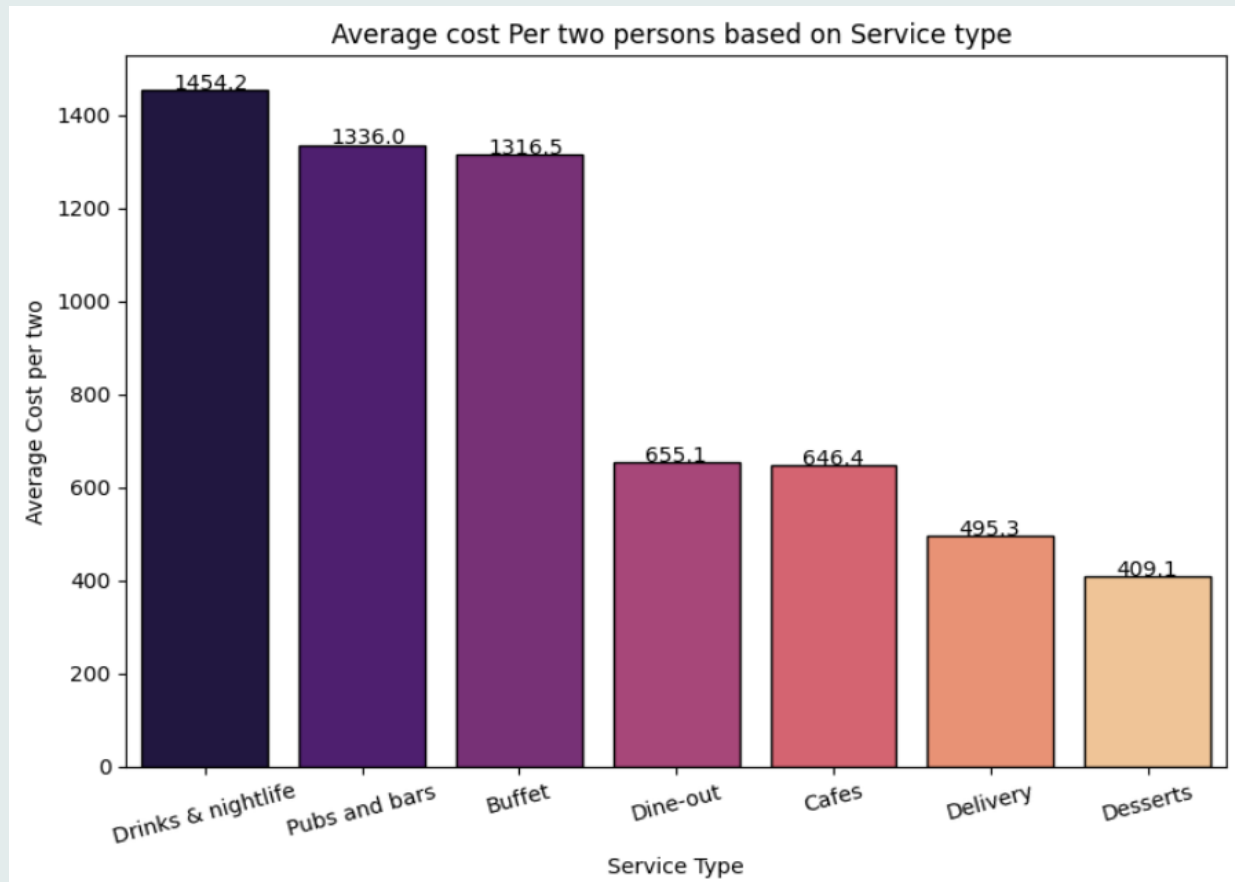
# Answering Business Questions

# 1. What are the top-rated cuisines and restaurant?



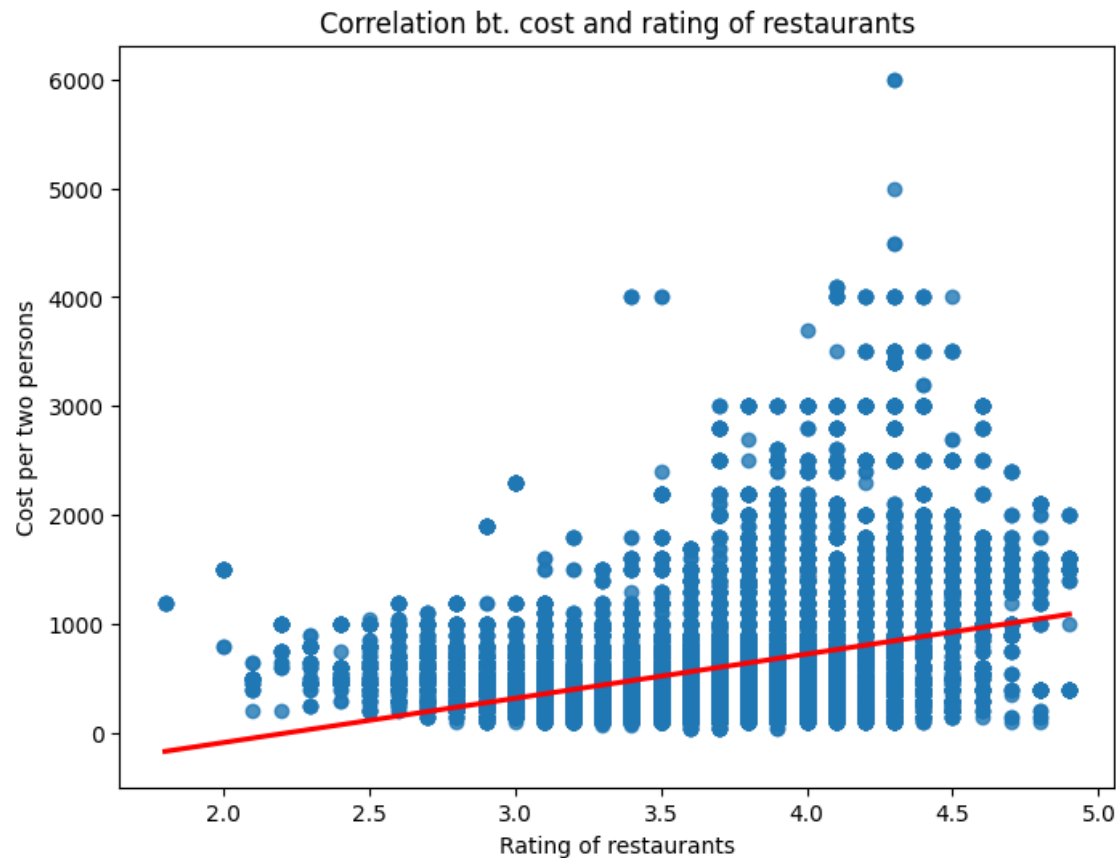
The top-rated restaurant **types** in Bangalore, based on average ratings, are **Nightlife** restaurants like Pubs and Bars, followed by **Buffet** restaurants. Additionally, the most popular **cuisines** in Bangalore are **North Indian**, **Chinese**, and **South Indian** cuisine.

## 2. What is the average cost for two individuals, categorized by type of service offered?



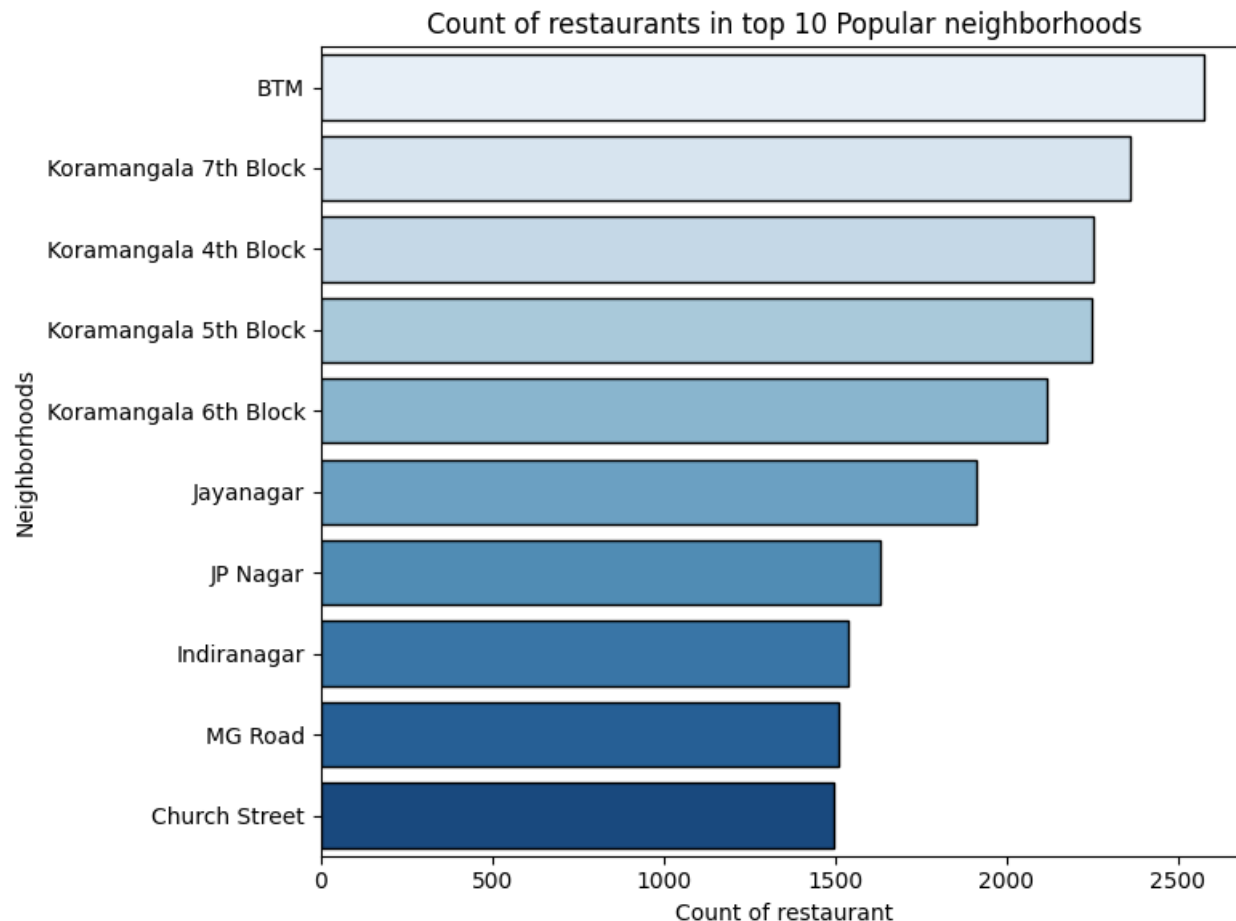
**Nightlife** venues are observed to have the **highest** mean **cost** for two individuals, Following closely are dining establishments that offer **buffet** services, while various **other** restaurant **types** provide a more **budget-friendly** average cost.

### 3. How does the average cost for two persons affect the rating of the restaurant?



it is evident that the **correlation** between the cost per two persons in a restaurant and the restaurant's rating is **not particularly strong** when the rating is **below 3.0**. However, as the rating **surpasses** this **threshold**, the **cost** tends to **rise**, eventually reaching significantly high levels in the case of upscale, luxurious restaurants, often exceeding 6000 INR for two persons.

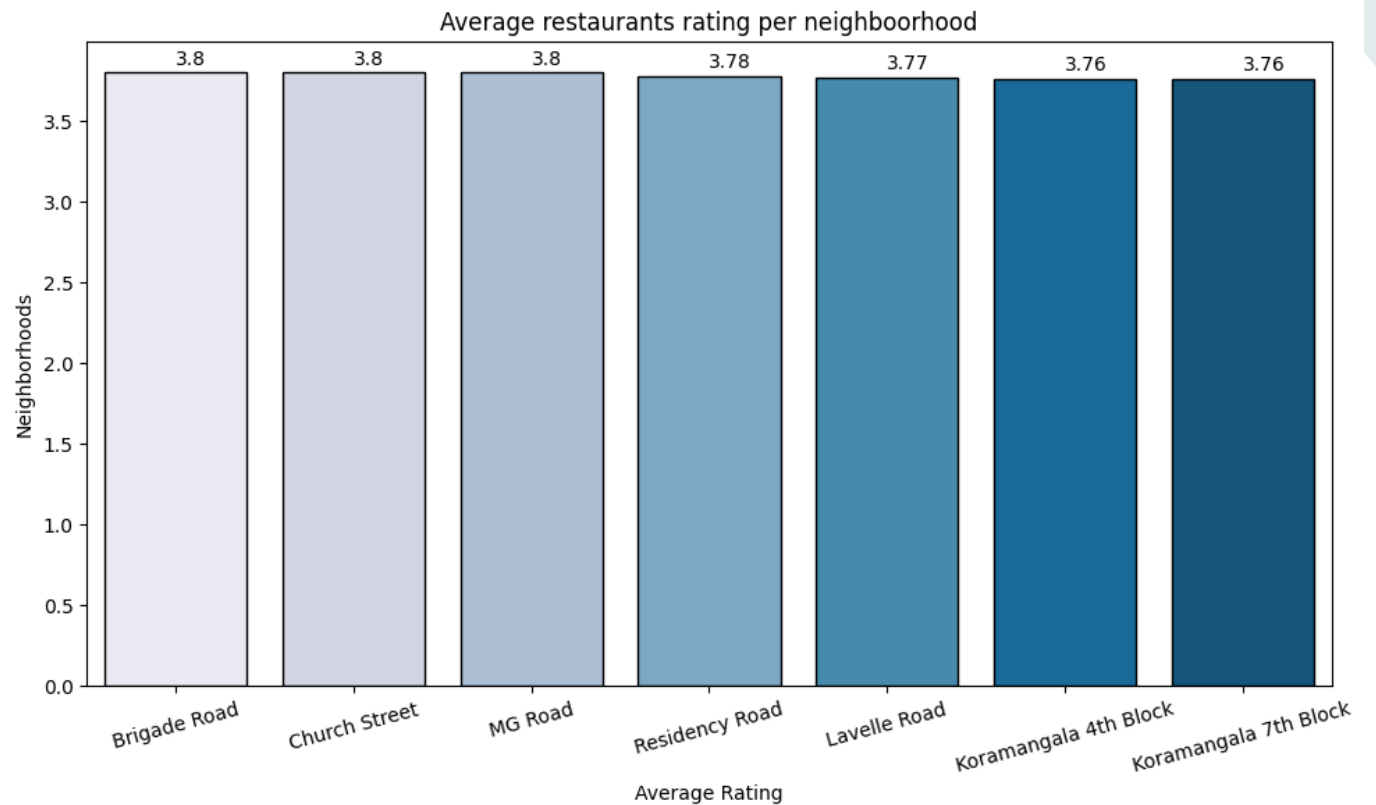
## 4. Which neighborhoods in Bangalore rank among the top 10 most popular for restaurants?



BTM emerges as the foremost neighborhood for dining establishments, boasting a substantial presence of over 2200 restaurants, closely trailed by the Koramangala Blocks and Jayanagar areas.

# 5. Is there an influence of a restaurant's location on its rating?

The neighborhoods of **Brigade Road, Church Street, and MG Road** stand out as the top three areas with the highest restaurant ratings, indicating that these locations are associated with particularly well-rated dining establishments.



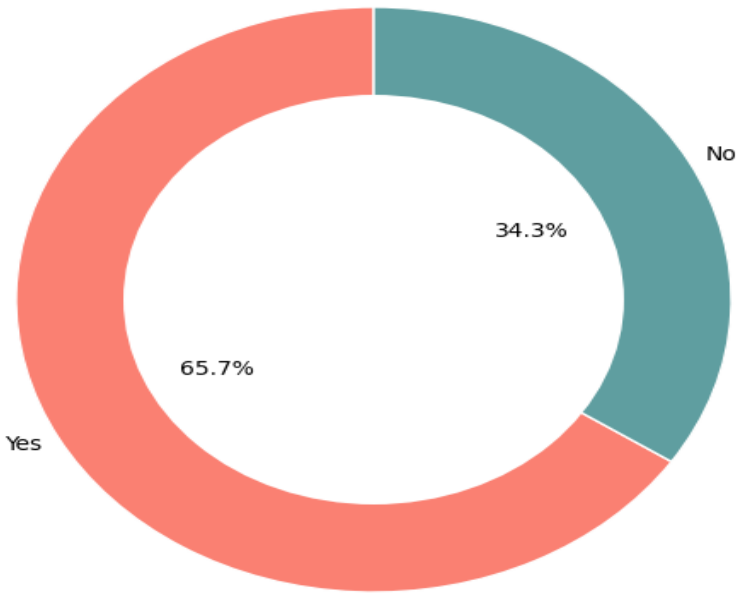
## 5. What proportion of restaurants provide online ordering and table booking options, and what impact does this dual offering have on their ratings?

In Bengaluru, **most** dining establishments offer **online ordering services**, while only a **limited fraction** provide the option for **advance table reservations**. Interestingly, restaurants with **table booking** or **online ordering** facilities tend to have **higher average ratings** compared to those without these amenities.

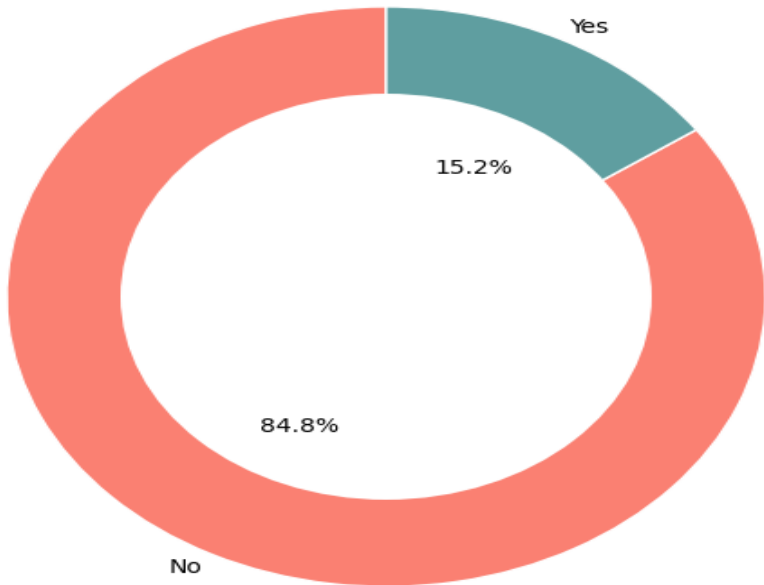
	online_ordering?	ratings
1	Yes	3.724
0	No	3.660

	table_bookings?	ratings
1	Yes	4.143
0	No	3.622

Percentage of restaurants having Online Ordering facility

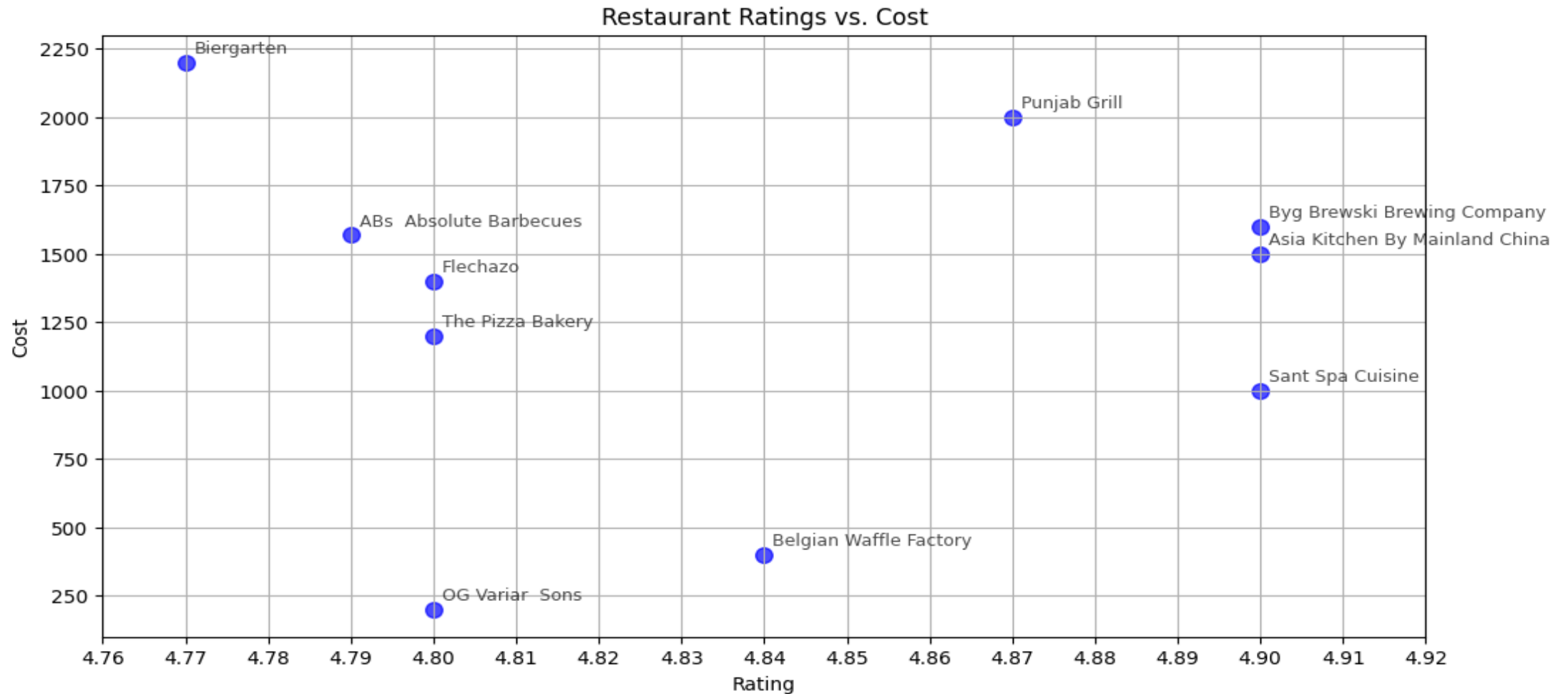


Percentage of restaurants having table booking facility



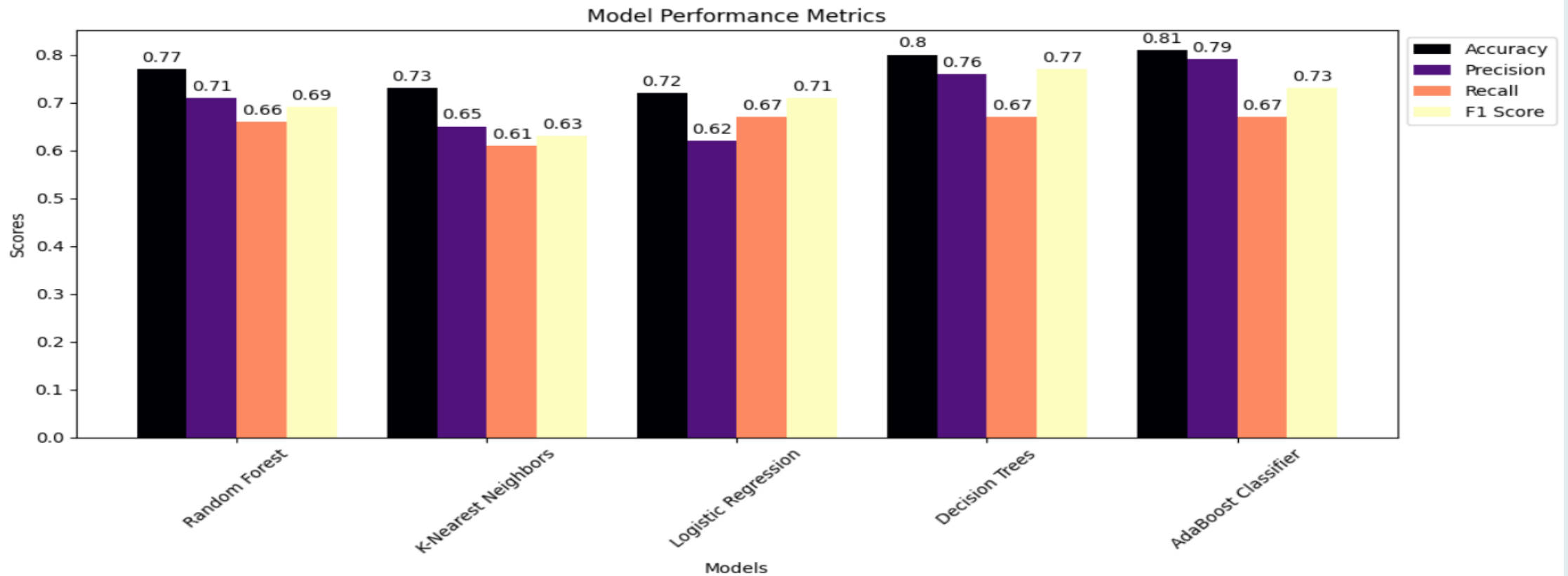


## 6. What are the top 10 highest-rated restaurants and their average cost and Rating?

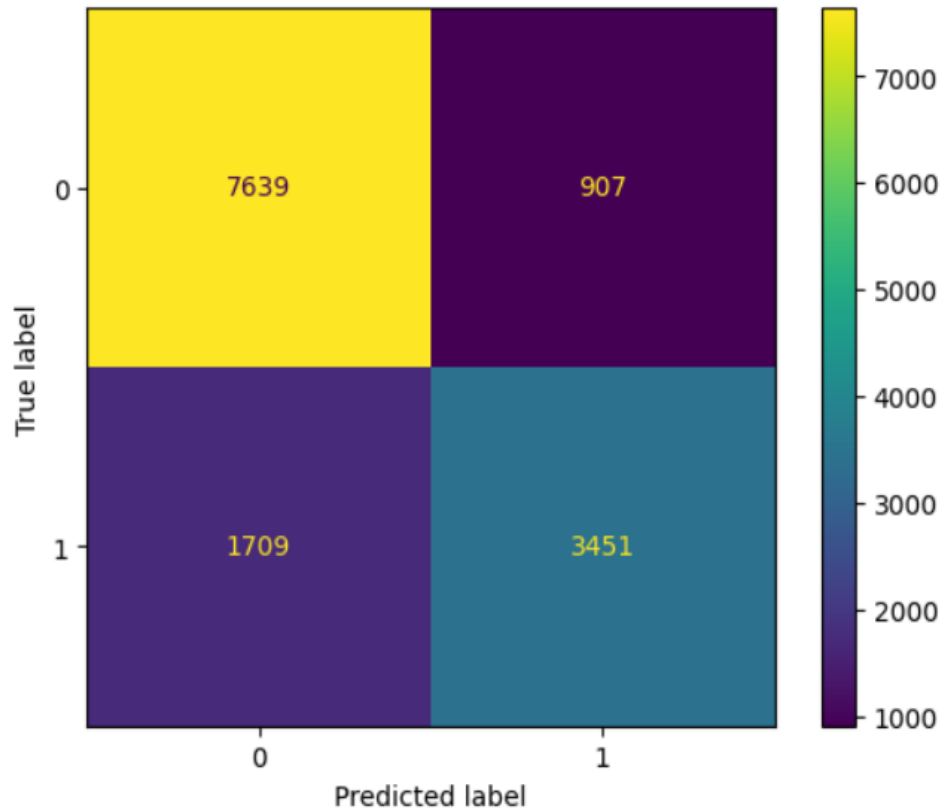


# Interpreting Predictive Model Evaluation





The first phase of the algorithm selection process commenced by establishing a minimum accuracy requirement of 80%. This prerequisite led us to identify the AdaBoost Classifier as the sole applicable algorithm. Additionally, we thoroughly examined the precision-recall tradeoff and deemed it acceptable.



Subsequently, an evaluation of the Confusion Matrix unveiled that the classifier's performance was **less than optimal** but still **acceptable**. It generated a mere **2,616** incorrect predictions out of **13,706** cases, accounting for approximately **19%** of false predictions. Within these errors, **907** instances were erroneously classified as **successful** restaurants when they were **unsuccessful**, while **1,709** cases were mistakenly classified as **unsuccessful** when they were, in fact, **successful** restaurants.

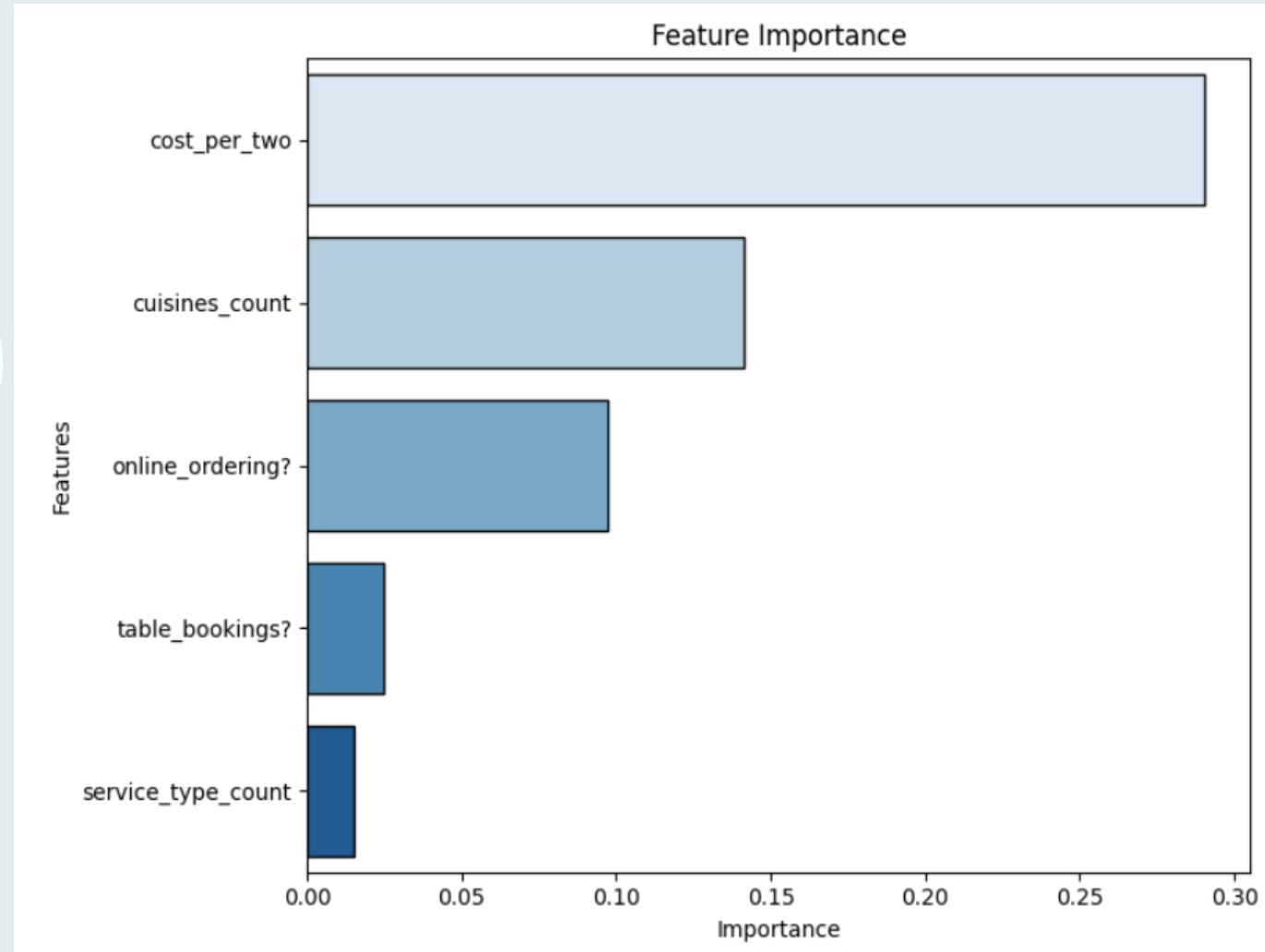
In our attempts to enhance performance, we explored various approaches but were unable to achieve significant improvements. Therefore, as a potential avenue for future work, we recommend the **collection of more data** and the **expansion of feature sets** to facilitate **easier class identification by the algorithms**. Additionally, it is advisable to explore the utilization of **more powerful techniques**, such as **neural networks**.

A red sticky note with a white circular punch hole in the top-left corner. The word "results" is written in a bold, white, lowercase sans-serif font, centered on the note.

**results**



The analysis conducted by the model suggests that the **primary determinant** of a restaurant's success is its **cost per two** individuals. It also indicates that the restaurant's **location** does **not** play a significantly **important** role in determining its success, which may appear somewhat **unreasonable**. Additionally, the model assigns relatively **lower importance** to the **type of service and cuisine** provided by the restaurant but places a **substantial emphasis** on the **count of services and cuisines** available. Furthermore, the model places **importance** on whether the restaurant offers **online ordering and table reservations** or not.



*Thank You!*